Desktop vs Laptop

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At a recent learning centre meeting, the topic of what was better to get, in my opinion, a desktop or a laptop?

We agreed to include various other devices in the category of 'laptop' – tablets, Chromebooks, netbooks, notebooks, etc. Let's take a look at the various factors that should influence your decision.

Performance – This used to be the biggest differentiator between laptop versus desktop decisions, but this is not true any longer. The modern CPU (Central Processing Unit) chip designs have greatly reduced the heat generated and thereby eliminated one of the biggest problems with portable devices; the need to cool down the CPU effectively in a limited space within the case. The latest Intel and AMD CPUs are available in basically the same speeds and formats across both desktop and laptop motherboards.

However, the smaller size of laptops does command a premium price over that of desktops due to higher manufacturing costs for the same performance, as a general rule. SSDs (Solid State Disks) are available for both and their performance will be similar in either PC.

Storage Capacity – This is the other major area that has dramatically changed. Desktops typically have had larger capacity hard drives for storage – a 3.5" width hard drive case is still the standard in desktops while laptops standardized on a 2.5" width form. Large capacity drives (1TB+) are cheaper and were only available in the desktop size until the last 2 years or so when SSDs became available at a competitive cost to traditional hard drives. When fitted into a desktop case, newer cases have drive bays sized for the 2.5" SSD case, while cheap brackets are available for fitting them into any 3.5" case opening.

The latest developments are to move away from both 2.5" and 3.5" sizes to a "stick" SSD. There are several sizes in use today; one of the most common is called m2. These SSDs clip into a slot directly on the motherboard, similar to how a memory stick would This saves significant space that would otherwise be used by the storage drive in either a desktop or a laptop case.

Currently, only traditional 3.5" drives have very large capacities available (4TB+), but as time goes by, SSDs will become cheaper and a much better alternative. Check out my journal article earlier this year where I compared the two for full details. Display – This is an area where desktops can be a better value for the flexibility to connect to whatever

size display you have. Whether it is a 4K UHD 75" panel or a 24" desk LCD panel, either will work on a desktop. Now, many laptops offer HDMI or other ports to connect to displays, but if the reason for the laptop is portability, then the size of the laptop screen is what you'll be using most of the time, typically 13" to 17". The larger the screen, the weight will also increase proportionally on a laptop.

Graphics – Without a doubt, desktops are better suited for gaming due to the flexibility to replace and upgrade the video card. Some laptops, such as those from Alienware, do offer several video card options to compete with the best desktop offerings, but these are limited and more costly. For non-gamers, the basic video in either laptops or desktops is sufficient 95% of the time.

In the December 2019 issue of Consumer Reports, there just happens to be an article about this very topic. They report that in a survey taken in 2009, about 72% of the households have a desktop versus the 52% reporting having a laptop. Jump forward to 2019 and the number is now reversed with more households reporting laptops than desktops in almost the same ratio – about 74% laptops and 52% desktops now. Check it out for their recommended models and other factors you may want to consider.

If you have suggestions for topics that you would like to see explained, please let me know!

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